

### **REMARKS**

The present Amendment is in response to the Examiner's Office Action mailed March 14, 2005. Claims 1, 25, and 33 are amended, and new claims 35-37 are added. Claims 1-27 and 29-37 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

#### **1. Claim Rejections Under 35 U.S.C. § 103**

The Examiner rejects claims 1-27 and 29-34 under 35 U.S.C. § 103 as being unpatentable over *Van de Walle et al.* (U.S. Patent No. 5,383,211) in view of *Jewell et al.* (U.S. Patent No. 6,359,920).

A *prima facie* case of obviousness under 35 U.S.C. § 103 must satisfy three basic criteria. Among these criteria, there must be some suggestion or motivation to modify the reference or to

combine reference teachings. *See* MPEP 2143. The following discussion illustrates that for at least this reason, the *prima facie* case of obviousness is not satisfied for the pending claims.

Each of the currently pending independent claims 1, 25, and 33 recite, among other things: “at least one compressed quantum well.” Support for this amendment can be found, for example, at page 7, lines 1-5 of the specification as filed. In direct contrast, *Van de Walle* discloses methods of forming TM-polarized light in the wavelength ranges above 850 nm by adding biaxial tension to the quantum well. Column 3, lines 34-36; column 4, lines 4-26. In other words, *Van de Walle* operates in the tension regime whereas the presently recited claims operate in the compression regime.

*Jewell* cannot overcome the foregoing deficiencies of *Van de Walle*. Although *Jewell* arguably teaches compression, modifying *Van de Walle* with *Jewell* to suggest compression in the devices of *Van de Walle* is impermissible since doing so would expressly destroy the intended results of *Van de Walle*. Because creating tension is the very object of *Van de Walle*, replacing tension with compression would result in the loss of the desired polarization. *See* column 2, line 66 to column 3, line 7; column 4, lines 4-6 (“TM polarization can be obtained by subjecting the active layer to biaxial tension.”). It is well established that references cannot be combined where doing so would render one reference unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Accordingly, the Applicant respectfully asserts that present claims 1, 25, and 33 are patentable over the cited references.

Claims 2-24, 26, 27, 29-32, and 34 depend from at least one of claims 1, 25, and 33, and are therefore patentable over the cited references for at least the reasons listed above. Accordingly, the prompt allowance of claims 1-27 and 29-34 is respectfully requested.

**2. New Claims**

Claims 35-37 have been added to recited additional features of the invention that the Applicant believes are also patentable over the art of record. In particular, each of claims 35-37 recites: "wherein said barrier layers are in tension." Support for these claims can be found at page 7, lines 1-5 of the specification as filed. The prompt allowance of these claims is also respectfully requested.

**CONCLUSION**

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 15th day of August, 2005.

Respectfully submitted,



WILLIAM J. ATHAY  
Registration No. 44,515  
Attorney for Applicant  
Customer No. 022913  
Telephone: (801) 533-9800

WJA0000000778V001